

WHAT IS CLAIMED IS:

1. An antenna measurement system for measuring the radiation characteristic of a source antenna, the antenna measurement system comprising:
a tester body placed apart from the source antenna with a predetermined distance;
a plurality of measurement modules arranged at the tester body in a predetermined pattern, each measurement module having an IC chip for processing positional information and measured values to generate relevant signals, and a tester antenna for receiving and transmitting the signals from the IC chip, and upon receipt of frequency signals from the source antenna, generating induced power for driving the IC chip and transmitting the measured values for the frequency signals to the IC chip; and
a measurement controller for receiving the signals from the tester antenna and processing the positional information and the measured values of the respective measurement modules.
2. The antenna measurement system of claim 1 wherein the tester body is shaped with a plane, a sphere, a semi-sphere, a hexahedron, or a hexahedron with no bottom side.
3. The antenna measurement system of claim 1 or 2 wherein the measurement modules are installed at the locations of the tester body determined during the process of manufacturing the tester body.
4. The antenna measurement system of claim 1 wherein the measurement module is made by mounting the IC chip and the tester antenna at a substrate shaped with a rectangle, a circle or an oval with a length or a maximum diameter of several micrometers.
5. The antenna measurement system of claim 1 or 4 wherein the tester antenna has wires spirally wound on two or more-leveled imagined planes, and the wires formed at the imagined plane neighbors are connected to each other at the central ends or peripheral ends thereof to form a single line.
6. The antenna measurement system of claim 5 wherein a feeder is connected to the peripheral end or the central end of the wire formed at the bottommost imagined plane.
7. The antenna measurement system of claim 5 wherein the wire formed at the imagined plane is shaped with a rectangle, a circle, an oval, a hexagon or an octagon while being spirally wound forward or backward.

8. The antenna measurement system of claim 5 wherein an insulating layer is formed between the wires to prevent the possible short-circuiting.

9. The antenna measurement system of claim 1 or 4 wherein the tester antenna is structured such that spiral wires are formed on the one-sided surfaces of dielectric thin films, through holes are formed at the respective dielectric thin films such that the through holes are alternately connected to the central end or the peripheral end of the relevant wire, the dielectric thin films are deposited while filling the through holes with a conductive material, and a feeder is formed at the bottom side of the bottommost dielectric thin film such that the feeder is connected to the through hole thereof.

10. A method of measuring the radiation characteristic of a source antenna, the method comprising the steps of:

arranging a plurality of measurement modules at a tester body in a predetermined pattern, each module having an IC chip for processing positional information and measured values to generate signals, and a tester antenna for receiving and transmitting the signals from the IC chip, and upon receipt of frequency signals from the source antenna, generating induced power for driving the IC chip and transmitting the measured values for the frequency signals to the IC chip;

placing the tester body apart from the source antenna with a predetermined distance such that the tester body is perpendicular to the central axis of the source antenna; and

operating the source antenna, and operating the measurement controller such that the measurement controller receives and data-processes the positional information and the measured values from the tester antenna of each measurement module provided at the tester body.

11. A method of measuring the radiation characteristic of a source antenna, the method comprising the steps of:

arranging a plurality of measurement modules at a tester body in a predetermined pattern, each module having an IC chip for processing positional information and measured values to generate signals, and a tester antenna for receiving and transmitting the signals from the IC chip, and upon receipt of frequency signals from the source antenna, generating induced power for driving the IC chip and transmitting the measured values for the frequency signals to the IC chip;

placing the source antenna within the tester body such that the source antenna is positioned at the center of the tester body; and

operating the source antenna, and operating the measurement controller such that the measurement controller receives and data-processes the positional information and the measured values from the tester antenna of each measurement module provided at the tester body.

12. The method of claim 11 wherein the tester body is shaped with a sphere, a semi-sphere, a hexahedron, or a hexahedron with no bottom side.